



Geostatistics and specialised mining consulting services

Quantitative Group (QG) is a specialist mining industry consulting company that has the skills to help clients unlock hidden value in their business. We assist mining operations in extracting the full potential of their biggest assets - the ore body and their people - by focusing on fundamental resource and reserve practices.

Our philosophy, "Our Skills On Your Team", characterises our long-standing relationships with clients. This approach underpins the way we aim to develop unique solutions to your problems while working closely with your people to ensure that they have a sound understanding and ownership of the issues.

The QG consulting team is highly skilled with a wide range of commodity experience including base and precious metals, bulk commodities, diamonds and industrial minerals. Our people have a wealth of operational and managerial experience combined with excellent communication skills. CVs of directors and technical staff are available on our website:

www.qgroup.net.au/ourpeople.asp

Our services incorporate the complete resource to reserve spectrum from the design of sampling campaigns to generating estimates to evaluating financial models.

QG also provides internationally recognised expertise in mining industry audits and reviews focusing on:

- >> Mineral resource and ore reserve estimates;
- >> Mine geology practices and systems;
- >> Grade control and reconciliation;
- >> Geometallurgical modelling;
- >> Project risks; and
- >> Financial evaluation.

QGs major clients include:

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|-----------------------|--------------|
| >> Anglo Coal | >> Newcrest |
| >> Anglo Gold Ashanti | >> Ok Tedi |
| >> BHP Billiton | >> Rio Tinto |
| >> Goldfields | >> Vale/Inco |
| >> Ivanhoe | >> Xstrata |
| >> Newmont | |

Strategic Consulting

QG's industry experience enables us to provide relevant and focused consulting to help our clients achieve the following:

- >> Reviews of corporation-wide resource evaluation strategies;
- >> Detailed assessments of resource estimations and resource to reserve reconciliations;
- >> Presentation of industry-leading technical training in geostatistics and related areas, including geometallurgical modelling, sampling, reconciliation, simulation, financial risk modelling, technical leadership and management.
- >> Independent valuations of mining projects for the purposes of mergers and acquisitions or listing on a stock exchange;
- >> Development and implementation of guidelines and procedures for mining groups, including public reporting of mineral resources and ore reserves;
- >> Objective and holistic review of evaluation models to identify and quantify risks and opportunities in new mining projects or existing operational mines; and
- >> Presentation of non-technical management seminars for senior managers and executives to establish common conceptual framework enabling informed planning of strategy.

Mine Geology

Geostatistics

Resources & Reserves

Strategic Mine Planning

Geometallurgical Modelling

Reconciliation & Grade Control

Financial Evaluation

Risk Modelling

Training

Audit & Due Diligence



High Level Technical Consulting

QG's consultants have provided the following types of high-level technical consulting to various mining clients:

>> Risk: evaluation, development and implementation of advanced geostatistical approaches to characterise risk (spatial simulations and risk analysis) combined with evaluating mining, treatment and financial risks;

>> Recoverable resources: evaluation, development and implementation of advanced geostatistical approaches to resource estimation that better account for mining and metallurgical responses of the orebody;

>> Geostatistics for non-grade variables: investigation of spatial estimation and risk characterisation for metallurgical, geotechnical, and environmental characterisation;

>> Expert opinion and guidance in the scoping and management of third party geostatistical consulting (i.e. acting in an 'in-house' role for the client); and

>> Training of technical staff in advanced geostatistical methodologies.

Knowledge Transfer

We believe that transferring our expertise and experience to our clients is essential. We conduct public and in-house training programmes, act as mentors and business coaches and work as co-pilots on client projects. In recent years we have provided knowledge transfer at a variety of levels from introductory to advanced levels, covering theory, practice and software/ process training. QG offer a number of public training courses and specialise in customising in-house workshops to meet client needs.

QG's Model

QG are:

>> Small and specialised;

>> Highly skilled (qualifications in geology, mining engineering or metallurgy; post-graduate training in geostatistics, business management, risk and finance);

>> Experienced (in industry roles as well as consulting track-record and reputation);

>> Collaborative (working with companies & research partners in generating high quality industrial solutions); and

>> Innovative (we invest highly in R&D and maintain excellent connections with internationally recognised research institutions).

Compared to conventional mining consulting models, QGs differentiating capability is three fold:

1. We are dedicated to knowledge transfer: this goes beyond training of technical personnel and extends to the senior managers we work with;

2. We form a limited number of long-term strategic alliances with clients: in this way the client can start to interact with QG as if we were an internal consulting group and we become familiar with people and technical issues inside client organisations; and

3. We provide only expert services in the area of mineral resources: there is no 'production pipeline' of junior staff needing to be 'fed' with tasks that are best performed (owned) by clients. QG's services are focused wherever the resource/reserve touches the value chain.

In summary, QG provide the following three services to our clients:

1. Knowledge transfer: increasing skill and confidence of client technical personnel in geostatistics and resource geology (by formal and informal training and mentoring);

2. High-level technical consulting:

o Addressing issues that may be beyond the technical capabilities of the client, especially in the areas of risk analysis, recoverable resource estimation and other 'advanced' geostatistical arenas;

o Developing and improving resource related systems including reconciliation and risk assessment;

o High-level review of resource estimates or coordination of resource estimation consulting with the perspective of 'internal (company) geostatistician'; and

3. Strategic consulting: dealing with senior management on strategic issues involving the organisation, implementation and optimisation of resource-related strategy.

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